UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,458	02/25/2002	Belimar Velazquez	83881 THC	4315

7590 11/10/2005

Thomas H. Close,
Patent Legal Staff,
Eastman Kodak Company
343 State Street
Rochester, NY 14650-2201

EXAMINER	
PERUNGAVOOR, SATHYANARAYA V	
ART UNIT	**PAPER NUMBER**
2625	

DATE MAILED: 11/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/082,458	VELAZQUEZ ET AL.	
	Examiner	Art Unit	
	Sath V. Perungavoor	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02/25/02*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Duty of Disclosure

[1] The following is a quotation of the appropriate paragraphs of 37 CFR 1.56:

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

(1) Prior art cited in search reports of a foreign patent office in a counterpart application, and

(2) The closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

(1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or

(2) It refutes, or is inconsistent with, a position the applicant takes in:

(i) Opposing an argument of unpatentability relied on by the Office, or

(ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

(1) Each inventor named in the application;

(2) Each attorney or agent who prepares or prosecutes the application; and

(3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

(e) In any continuation-in-part application, the duty under this section includes the duty to disclose to the Office all information known to the person to be material to patentability, as defined in paragraph (b) of this section, which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

- Examiner respectfully requests the applicant(s) to disclose any patents and/or applications that may be material to a double patenting rejection.

Information Disclosure Statement

[2] The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

- Examiner respectfully requests the applicants to provide a copy of the document titled "Optics in Photography" by R. Kingslake, which the applicants incorporated by reference in page 5 of the specification.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Following is a quotation from MPEP 2106.IV.B.1(a) (emphasis added):

> **Data structures <u>not</u> claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer.** See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

[3] Claims 9-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as set forth in MPEP 2106.IV.B.1(a).

- Adding the limitation of "stored on a computer-readable medium" after the phrase "computer program product" would resolve this issue.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

[4] Claims 1, 2, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Terashita et al. ("Terashita") [US 5,128,711].

Regarding claim 1, Terashita meets all the claim limitations, as follows:

A method of calculating the size of a human face in a digital image *[Figure 4]*, comprising the steps of: a) providing image capture metadata associated with a digital image that includes the image of a human face, the metadata including subject distance, focal length, focal plane resolution *[Column 4 Lines 25-29; Column 5 Lines 17-32; Column 6 Lines 5-6: Focal plane resolution is inherently present, since facial area is defined in number of pixels instead of metric units. Focal plane resolution is only needed to convert from metric to number of pixels.]*; b) providing a standard face dimension *[Column 6 Line 14-17: FS_d]*; and c) calculating the size of a human face at the focal plane using the metadata and the standard face size *[Column 6 Lines 7-17]*.

Regarding claim 2, Terashita meets all the claim limitations, as follows:

A method of detecting a face in an image, comprising the steps of *[Figure 4]*: a) detecting a skin colored region in a digital image *[Column 5 Lines 65-68]*; b) calculating the expected size of a human face in the digital image by *[Column 6 Lines 7-17]*, i)

providing image capture metadata associated with a digital image that includes the image of a human face including subject distance, focal length, focal plane resolution *[Column 4 Lines 25-29; Column 5 Lines 17-32; Column 6 Lines 5-6: Focal plane resolution is inherently present, since facial area is defined in number of pixels instead of metric units. Focal plane resolution is only needed to convert from metric to number of pixels.]*, ii) providing a standard face dimension *[Column 6 Line 14-17: FS_d]*, and iii) calculating the size of a human face using the metadata and the standard face dimension *[Column 6 Lines 7-17]*; and c) comparing the size of the detected skin color region with the calculated size of a human face to determine if the skin color region is a human face *[Column 6 Lines 18-22]*.

Regarding claim 9, Terashita meets all the claim limitations, as follows:

A computer program product for performing the method of claim 1 *[48 on Figure 3]*.

Regarding claim 10, Terashita meets all the claim limitations, as follows:

A computer program product for performing the method of claim 2 *[48 on Figure 3]*.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

[5] Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Terashita in view of Wang et al. ("Wang") [US 6,278,491].

Regarding claim 3, Terashita meets the claim limitations as set forth in claim 2.

Terashita does not explicitly disclose the following claim limitations:

> The method of claimed in claim 2, further comprising the step of evaluating a detected face region for red-eye defects.

However, in the same field of endeavor Wang discloses the deficient claim limitations, as follows:

> The method of claimed in claim 2, further comprising the step of evaluating a detected face region for red-eye defects *[Column 4 Lines 24-43]*.

Terashita and Wang are combinable because they are from the same field of face detection. It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Terashita with Wang to include red-eye detection, the motivation being automatic red-eye reduction with no manual intervention *[Column 3 Lines 10-14]*.

[5] Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terashita in view of Matsumura et al. ("Matsumura") [US 6,222,583].

Regarding claim 4, Terashita meets the claim limitations as set forth in claim 1.

Terashita further discloses storing the metadata on film in the form of a bar code *[Figure 2]*.

Terashita does not explicitly disclose the following claim limitations:

> The method of claim 1, wherein the digital image is captured by a digital camera that includes means for appending the metadata to a digital image file in the camera.

However, in the same field of endeavor Matsumura discloses the deficient claim limitations, as follows:

> The method of claim 1, wherein the digital image is captured by a digital camera that includes means for appending the metadata to a digital image file in the camera *[Figure 4]*.

Terashita and Matsumura are combinable because they are from the same field of image processing.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Terashita with Matsumura to append the metadata to a digital image file, the motivation being to enable further processing by the computer *[Column 1 Lines 60-67]*.

Regarding claim 5, all claimed limitations are set forth and rejected as per discussion for claims 2 and 4.

[6] Claims 6, 7, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terashita in view of Ogawa [US 5,623,710] further in view of Jacobson [NPL document titled "Photographic Lenses Tutorial"].

Regarding claim 6, Terashita discloses the following claim limitations:

> A method of calculating the expected size range of human faces in a digital image, comprising the steps of *[Figure 4]*: a) providing image capture metadata associated with a digital image that includes the image of a human face, the metadata including

subject distance, focal length, focal plane resolution *[Column 4 Lines 25-29; Column 5 Lines 17-32; Column 6 Lines 5-6: Focal plane resolution is inherently present, since facial area is defined in number of pixels instead of metric units. Focal plane resolution is only needed to convert from metric to number of pixels.]*; b) providing a standard face dimension *[Column 6 Line 14-17: FS_d]*; d) calculating the range of expected face sizes in the digital image based on the depth of field calculation and standard face size *[Column 6 Lines 7-17; Column 9 Lines 27-40]*.

Terashita does not explicitly disclose the following claim limitations:

the metadata including the f-number

However, in the same field of endeavor Ogawa discloses the deficient claim limitations, as follows:

the metadata including the f-number *[Column 3 Lines 8-15 and Column 4 Lines 25-34: Aperture opening meets this limitation.]*.

Terashita and Ogawa are combinable because they are from the same field of film processing using a metadata.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Terashita with Ogawa to include f-number in a metadata, the motivation being to improve the image processing capabilities with a computer *[Column 1 Lines 15-24]*.

Terashita and Ogawa does not explicitly disclose the following claim limitations:

c) calculating the depth of field using the metadata; and

However, in the same field of endeavor Jacobson discloses the deficient claim limitations, as follows:

c) calculating the depth of field *[Page 4 Paragraph 5]*.

Terashita, Ogawa and Jacobson are combinable because they are in the same field of photography.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Terashita and Ogawa with Jacobson to calculate the depth of field, the motivation being to obtain a sharp image *[Page 4, Paragraph 4]*.

Regarding claim 7, all claimed limitations are set forth and rejected as per discussion for claims 6 and 2.

Regarding claim 11, all claimed limitations are set forth and rejected as per discussion for claims 6 and 9.

Regarding claim 12, all claimed limitations are set forth and rejected as per discussion for claims 7 and 10.

[7] Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Terashita in view of Ogawa further in view of Jacobson and further in view of Wang.

Regarding claim 8, all claimed limitations are set forth and rejected as per discussion for claims 6, 2 and 3.

Contact Information

[8] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Sath V. Perungavoor whose telephone number is (571) 272-7455. The examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Bhavesh M. Mehta whose telephone number is (571) 272-7453, can be reached on Monday to Friday from 9:00am to 5:00pm. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sath V. Perungavoor
Group Art Unit: 2625
Telephone: (571) 272-7455
Date: October 26, 2005

KANJIBHAI PATEL
PRIMARY EXAMINER